Claims

1. Method for identifying compounds useful for treating and/or preventing Cytomegalovirus infection and/or associated diseases comprising:
   a) contacting a test compound with one or more cellular kinases selected from the group consisting of RICK, RIP, NIK, MKK3, and SRPK-2; and
   b) detecting a change in activity of said cellular kinase.

2. Method for detecting Cytomegalovirus infection and/or associated diseases in an individual comprising:
   a) providing a sample from said individual; and
   b) detecting activity, in said sample, of one or more cellular kinases selected from the group consisting of RICK, RIP, NIK, MKK3, and SRPK-2.

3. Method for detecting Cytomegalovirus infection and/or associated diseases in cells and/or cell lysates comprising:
   a) providing a sample from said cells; and
   b) detecting activity, in said sample, of one or more cellular kinases selected from the group consisting of RICK, RIP, NIK, MKK3, and SRPK-2.

4. A monoclonal or polyclonal antibody that binds to a cellular kinase selected from the group consisting of RICK, RIP, NIK, MKK3, and SRPK-2.

5. Method for preventing and/or treating Cytomegalovirus infection and/or associated diseases in an individual by administering a pharmaceutically effective amount of an inhibitor to said individual, wherein said inhibitor inhibits at least partially the activity of one or more cellular kinases selected from the group consisting of RICK, RIP, NIK, MKK3, and SRPK-2, or wherein said inhibitor inhibits at least partially the production of one or more cellular kinases selected from the group consisting of RICK, RIP, NIK, MKK3, and SRPK-2.

6. Method for regulating the production of Cytomegalovirus in an individual by administering an individual a pharmaceutically effective amount of an inhibitor wherein said inhibitor inhibits at least partially the activity of one or more

cellular kinases selected from the group consisting of RICK, RIP, NIK, MKK3, and SRPK-2, or wherein said inhibitor at least partially inhibits the production of one or more cellular kinases selected from the group consisting of RICK, RIP, NIK, MKK3, and SRPK-2.

7. Method for regulating the production of Cytomegalovirus in cells by administering the cells a pharmaceutically effective amount of an inhibitor wherein said inhibitor inhibits at least partially the activity of one or more cellular kinases selected from the group consisting of RICK, RIP, NIK, MKK3, and SRPK-2, or wherein said inhibitor at least partially inhibits the production of one or more cellular kinases selected from the group consisting of RICK, RIP, NIK, MKK3, and SRPK-2 in the cells.

8. Method according to claim 5, 6, or 7 wherein the inhibitor is a monoclonal or polyclonal antibody which binds to a cellular kinase selected from the group consisting of RICK, RIP, NIK, MKK3, and SRPK-2.

9. Method for preventing and/or treating Cytomegalovirus infection and/or associated diseases in an individual by administering a pharmaceutically effective amount of an activator to said individual, wherein said activator activates at least partially the activity of one or more cellular kinases selected from the group consisting of RICK, RIP, NIK, MKK3, and SRPK-2, or wherein said activator activates or stimulates at least partially the production of one or more cellular kinases selected from the group consisting of RICK, RIP, NIK, MKK3, and SRPK-2.

10. Method for regulating the production of Cytomegalovirus in an individual by administering an individual a pharmaceutically effective amount of an activator wherein said activator activates at least partially the activity of one or more cellular kinases selected from the group consisting of RICK, RIP, NIK, MKK3, and SRPK-2, or wherein said activator at least partially activates or stimulates the production of one or more cellular kinases selected from the group consisting of RICK, RIP, NIK, MKK3, and SRPK-2.

11. Method for regulating the production of Cytomegalovirus in cells by administering the cells a pharmaceutically effective amount of an activator wherein said activator activates at least partially the activity of one or more cellular kinases selected from the group consisting of RICK, RIP, NIK, MKK3,

and SRPK-2, or wherein said activator at least partially activates or stimulates the production of one or more cellular kinases selected from the group consisting of RICK, RIP, NIK, MKK3, and SRPK-2 in the cells.

12. Oligonucleotide that binds to the DNA or RNA encoding a cellular kinase selected from the group consisting of RICK, RIP, NIK, MKK3, and SRPK-2.

13. Method for regulating the expression of at least one cellular kinase selected from the group consisting of RICK, RIP, NIK, MKK3, and SRPK-2 in an individual comprising the step of administering the individual a pharmaceutically effective amount of an inhibitor wherein said inhibitor inhibits at least partially the transcription of DNA or the translation of RNA encoding one of said cellular kinases.

14. Method for regulating the expression of at least one cellular kinase selected from the group consisting of RICK, RIP, NIK, MKK3, and SRPK-2 in the cells comprising the step of administering the cells a pharmaceutically effective amount of an inhibitor wherein said inhibitor inhibits at least partially the transcription of DNA or the translation of RNA encoding one of said cellular kinases.

15. Method according to claim 5, 6, 7, 13, or 14 wherein the inhibitor is a oligonucleotide which binds to the DNA and/or RNA encoding a cellular kinase selected from the group consisting of RICK, RIP, NIK, MKK3, and SRPK-2.

16. Method for regulating the expression of at least one cellular kinase selected from the group consisting of RICK, RIP, NIK, MKK3, and SRPK-2 in an individual comprising the step of administering the individual a pharmaceutically effective amount of an activator wherein said activator activates at least partially the transcription of DNA or the translation of RNA encoding one of said cellular kinases.

17. Method for regulating the expression of at least one cellular kinase selected from the group consisting of RICK, RIP, NIK, MKK3, and SRPK-2 in the cells comprising the step of administering the cells a pharmaceutically effective amount of an activator wherein said activator activates at least partially the

transcription of DNA or the translation of RNA encoding one of said cellular kinases.

18. A solid support useful for detecting Cytomegalovirus infection in an individual comprising one or more immobilized oligonucleotides, wherein said oligonucleotide(s) is (are) capable of detecting activity of one or more cellular kinases selected from the group consisting of: RICK, RIP, NIK, MKK3, and SRPK-2.

19. A solid support useful for detecting Cytomegalovirus infection in a cell comprising one or more immobilized oligonucleotides, wherein said oligonucleotide(s) is (are) capable of detecting activity of one or more cellular kinases selected from the group consisting of RICK, RIP, NIK, MKK3, and SRPK-2.

20. A solid support useful for screening compounds useful for treating and/or preventing Cytomegalovirus infection comprising one or more immobilized oligonucleotides, wherein said oligonucleotide(s) encode one or more cellular kinases selected from the group consisting of RICK, RIP, NIK, MKK3, and SRPK-2.

21. A solid support useful for screening compounds useful for treating and/or preventing Cytomegalovirus infection comprising one or more immobilized cellular kinases selected from the group consisting of RICK, RIP, NIK, MKK3, and SRPK-2.

22. Composition useful to treat an individual afflicted with Cytomegalovirus and/or associated diseases comprising one or more inhibitors capable of inhibiting activity of one or more cellular kinases selected from the group consisting of RICK, RIP, NIK, MKK3, and SRPK-2 or capable of decreasing the expression of at least one cellular kinase selected from the group consisting of RICK, RIP, NIK, MKK3, and SRPK-2.

23. Composition useful to treat an individual afflicted with Cytomegalovirus and/or associated diseases comprising one or more activators capable of increasing activity of one or more cellular kinases selected from the group consisting of RICK, RIP, NIK, MKK3, and SRPK-2 or capable of increasing

the expression of at least one cellular kinase selected from the group consisting of RICK, RIP, NIK, MKK3, and SRPK-2.

24. Composition useful to treat an individual afflicted with Cytomegalovirus comprising at least one compound selected from the group consisting of
6-(2,6-Dichlorophenyl)-8-methyl-2-(3-morpholin-4-yl-propylamino)-8H-pyrido[2,3-d]pyrimidin-7-one;
8-methyl-6-phenyl-2-(pyridin-4-yl-amino)-8H-pyrido[2,3-d]pyrimidin-7-one;
6-(2,6-Dichlorophenyl)-8-methyl-2-[3-(4-methylpiperazin-1-yl)-propylamino]-8H-pyrido[2,3-d]pyrimidin-7-one;
4-[5-(3-Iodophenyl)-2-(4-methanesulfinylphenyl)-3H-imidazol-4-yl]-pyridine;
(3-Bromophenyl)-(6,7-dimethoxyquinazolin-4-yl)-amine;
(3-Bromophenyl)-(6,7-diethoxyquinazolin-4-yl)-amine;
2-(3,4-Dihydroxyphenyl)-3,5,7-trihydroxychromen-4-one;
5-Cloro-3-(1H-pyrrol-2-ylmethylene)-1,3-dihydroindol-2-one;
4-Quinolin-4-ylmethylene-4H-isoquinoline-1,3-dione;
2,3,7,8-Tetrahydroxychromeno[5,4,3-cde]chromene-5,10-dione;
3-(1H-Pyrrolo[2,3-b]pyridin-3-ylmethylene)-1,3-dihydropyrrolo[2,3-b]pyridin-2-one and/or phamaceutically acceptable salts of these compounds.

25. Composition according to any one of claims 17 – 19 further comprising pharmaceutically acceptable carriers, excipient, and/or diluents.

26. Use of the compounds selected from the group comprising:
6-(2,6-Dichlorophenyl)-8-methyl-2-(3-morpholin-4-yl-propylamino)-8H-pyrido[2,3-d]pyrimidin-7-one;
8-methyl-6-phenyl-2-(pyridin-4-yl-amino)-8H-pyrido[2,3-d]pyrimidin-7-one;
6-(2,6-Dichlorophenyl)-8-methyl-2-[3-(4-methylpiperazin-1-yl)-propylamino]-8H-pyrido[2,3-d]pyrimidin-7-one;
(3-Bromophenyl)-(6,7-dimethoxyquinazolin-4-yl)-amine;
(3-Bromophenyl)-(6,7-diethoxyquinazolin-4-yl)-amine and
pharmaceutically acceptable salts of these compounds as an inhibitor of the cellular kinase RICK.

27. Use of the compounds selected from the group comprising:
2-(3,4-Dihydroxyphenyl)-3,5,7-trihydroxychromen-4-one;
5-Cloro-3-(1H-pyrrol-2-ylmethylene)-1,3-dihydroindol-2-one;
4-Quinolin-4-ylmethylene-4H-isoquinoline-1,3-dione; and

pharmaceutically acceptable salts of these compounds as an inhibitor of the cellular kinase RIP.

28. Use of a compound according to claim 26 or 27 for the manufacture of a pharmaceutical composition for prophylaxis and/or treatment of Cytomegalovirus infection and/or diseases associated therewith.